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10/607,235	06/27/2003	Shingo Tanaka	04329.3082	5861

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EXAMINER

LU, ZHIYU

ART UNIT	PAPER NUMBER
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2618

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/607,235	TANAKA, SHINGO
	Examiner Zhiyu Lu	Art Unit 2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 April 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-20 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 13 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 13 and 17, Applicant claims "a third transmission of data having the first identification information not corresponding to the second identification information of the command", which is confusing during reading because the word "data" has no preference on whether it is the same as "data" and "the data" represents throughout the claims or it is a totally different piece of data.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 8-9, 13, 15, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (JP09-190306) in view of Picard (US Patent#5680227).

Regarding claim 1, Mochizuki teaches a transmission apparatus (100 of Fig. 1) comprising:

- a transmission unit (150 of Fig. 1) configured to transmit one of data and a command;
- an input unit (131 of Fig. 1) configured to input one of a first instruction to transmit the data and a second instruction to transmit the command (Fig. 6);
- a first control unit (610 of Fig. 6) configured to control the transmission unit to start a first transmission of the data if the input unit inputs the first instruction (Fig. 6); and
- a second control unit (622 of Fig. 6) configured to control the transmission unit to start a second transmission of the command if the input unit inputs the second instruction and the transmission unit is not transmitting the data, to control the transmission unit not to start the second transmission if the transmission unit is transmitting the data having the first identification information corresponding to the second identification information of the command, and to control the transmission unit to interrupt a third transmission of data having the first identification information not corresponding to the second identification information of the command and to start the second transmission if the transmission unit has completed transmitting the data having the first identification information corresponding to the second identification information of the command (paragraph 0005, conventional printing process with a first in first out, FIFO, queue, explanation below).

In a FIFO queue, there is a bunch of data (D) and their corresponding commands (C), e.g. D1, C1, D2, C2, D3, C3, etc., waiting to be transmitted. It would have been obvious to one of

ordinary skill in the art to recognize that the transmission unit can start a transmission of C1 only if instruction to transmit C1 is inputted and D1 is already out of the queue. But if D1 is still in transmission/queue, C1 transmission cannot be started. Once D1 transmission is completed, C1 can start transmit and D2 (third transmission) has to wait (interrupted) even if instruction to start the third transmission is inputted. And this process of transmitting data and command in a FIFO queue is well known.

But, Mochizuki does not expressly disclose the data having first identification information, the command having second identification information for identifying data corresponding to the command.

Picard teaches sending data to be printed with the associated command data (column 3 lines 46-48), which implies identification and correspondence between data and command.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate corresponding data and command taught by Picard into the transmission apparatus of Mochizuki, in order to define print-intended data in image forming apparatus.

Regarding claim 13, Mochizuki teaches a transmission method as explained in response to claim 1 above.

Regarding claim 17, Mochizuki and Picard teach a computer readable storage medium storing instructions of a computer program which when executed by a computer system results in performance of steps as explained in response to claim 13 above.

Regarding claims 3, 15, and 19, Mochizuki and Picard teach the limitation of claim 1.

Mochizuki teaches further comprising a third control unit configured to control the transmission unit to sequentially transmit a plurality of data items of the data (paragraphs 0002-0004).

Regarding claim 8, Mochizuki and Picard teach the limitation of claim 1.

Mochizuki teaches the data being image data (abstract).

Regarding claim 9, Mochizuki and Picard teach the limitation of claim 8.

Mochizuki teaches the input unit inputs designation of to-be-transmitted image data of the image data (inherent), where printer driver (112 of Fig. 1) is initiated by application (111 of Fig. 1).

4. Claims 2, 4-6, 14, 16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (JP09-190306) in view of Picard (US Patent#5680227) and Kondo et al. (JP10-098605).

Regarding claims 2, 14, and 18, Mochizuki and Picard teach the limitations of claims 1, 13, and 17.

But, Mochizuki and Picard do not expressly disclose further comprising a third control unit configured to control the transmission unit to resume the third transmission interrupted by the second control unit, the third transmission interrupted being restarted after the command has been transmitted.

Kondo et al. teach further comprising a third control unit configured to control the transmission unit to resume the third transmission interrupted by the second control unit, the third

transmission interrupted being restarted after the command has been transmitted (Fig. 4, paragraphs 0033-0034).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate resuming previous transmission after interruption is gone taught by Kondo et al. into the apparatus, method, and program of Mochizuki and Picard, in order to automatically complete unfinished transmission.

Regarding claims 4, 16, and 20, Mochizuki and Picard teach the limitations of claims 1, 13, and 17.

But, Mochizuki and Picard do not expressly disclose wherein the input unit inputs the second instruction and the transmission unit has completed transmitting the data having the third identification information corresponding to the second identification information of the command, the second control unit determines whether or not the third transmission should be interrupted, the second control unit controlling the transmission unit to start the second transmission after the third transmission has been completed if the second control unit determines that the third transmission should be uninterrupted.

Kondo et al. teach when the input unit inputs the second instruction and the transmission unit transmits the data, the second control unit determines whether or not the third transmission should be interrupted, the second control unit controlling the transmission unit to start the second transmission after the third transmission is completed if the second control unit determines that the third transmission should be uninterrupted (Fig. 4, paragraphs 31-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate means to determine whether the third transmission should be interrupted taught by Kondo et al. into the apparatus, method, and program of Mochizuki and Picard, in order to determine transmission priority.

Regarding claim 5, Mochizuki, Picard, and Kondo et al. teach the limitation of claim 4. Kondo et al. teach if the input unit inputs the second instruction and the transmission unit has completed transmitting the data having the third identification information corresponding to the second identification information of the command, the second control unit determines whether or not the third transmission should be interrupted, the second control unit determining that the third transmission should be interrupted if a value obtained by dividing an amount of transmitted part of the data by an entire amount of the data is less than a threshold value, the second control unit also determining that the third transmission should be uninterrupted if the value obtained is not less than the threshold value (paragraph 0052).

Regarding claim 6, Mochizuki, Picard, and Kondo et al. teach the limitation of claim 4. Kondo et al. teach if the input unit inputs the second instruction and the transmission unit has completed transmitting the data having the third identification information corresponding to the second identification information of the command, the second control unit determines whether or not the third transmission should be interrupted, the second control unit determining that the third transmission should be interrupted if an estimated period of time for completing the third transmission is not less than a threshold value, the second control unit also determining that the

third transmission should be uninterrupted if the estimated period is less than the threshold value (Fig. 5, paragraphs 0035-0042).

5. Claims 7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (JP09-190306) in view of Picard (US Patent#5680227) and Yamaguchi et al. (US2002/0101443).

Regarding claim 7, Mochizuki and Picard teach the limitation of claim 1. But, Mochizuki and Picard do not expressly disclose the transmission unit utilizes a radio communication technique called Bluetooth (registered trademark).

Yamaguchi et al. teaches the transmission unit utilizes a radio communication technique called Bluetooth (paragraph 0024).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Bluetooth transmission taught by Yamaguchi et al. into the apparatus of Mochizuki and Picard, in order to utilize wireless communication link.

Regarding claim 10, Mochizuki and Picard teach the limitation of claim 8: But, Mochizuki and Picard do not expressly disclose the command includes an image display command used to command the receiving apparatus to display an image of first image data included in the image data already transmitted to the receiving apparatus.

Yamaguchi et al. teach the command includes an image display command used to command the receiving apparatus to display an image of first image data included in the image data already transmitted to the receiving apparatus (abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made incorporate commanding display unit to display received image data taught by Yamaguchi et al. into the apparatus of Mochizuki and Picard, in order to shorten display wait time.

Regarding claim 11, Mochizuki, Picard, and Yamaguchi et al. teach the limitation of claim 10. Yamaguchi et al. teach the input unit designates the first image data to display the image by the image display command if the input unit inputs an instruction to transmit the image display command (abstract).

Regarding claim 12, Mochizuki and Picard teach the limitation of claim 1. But, Mochizuki and Picard do not expressly disclose further comprising a transfer unit configured to transfer the image data based on an Initiator function of Remote Display feature incorporated in Basic Imaging Profile of Bluetooth (registered trademark), transmission of the image data, transmission of the image display command and interruption of the transmission of the image data being performed, using a PutImage function incorporated in the Profile, a Remote Display function incorporated in the Profile, and an Abort operation incorporated in Generic Object Exchange Profile, respectively.

Yamaguchi et al. teach using Bluetooth communication method between the commanding unit and display unit (paragraph 0024), which inherently teaches the limitation of further comprising a transfer unit configured to transfer the image data based on an Initiator function of Remote Display feature incorporated in Basic Imaging Profile of Bluetooth (registered trademark), transmission of the image data, transmission of the image display command and interruption of the transmission of the image data being performed, using a PutImage function incorporated in the Profile, a Remote Display function incorporated in the Profile, and an Abort operation incorporated in Generic Object Exchange Profile, respectively.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate using Bluetooth communication and its profiles taught by Yamaguchi et al. into the apparatus of Mochizuki and Picard, in order to efficiently utilize Bluetooth wireless communication for image data and command transmission.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhiyu Lu whose telephone number is (571) 272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system; see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhiyu Lu
July 2, 2007


NAY MAUNG
SUPERVISORY PATENT EXAMINER